IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	LI, Qiong et al
Serial No.	:	10/042,762
Confirmation No.	:	2738
Filing Date	:	February 22, 2002
Group Art Unit	:	2616
Examiner	:	Nguyen, Hanh

APPEAL BRIEF
On Appeal from Group Art Unit 2616

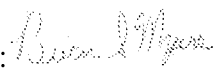Date: July 12, 2007

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I. REAL PARTY IN INTEREST

The real party in interest is Koninklijke Philips Electronics N.V., the assignee of record.

II. RELATED APPEALS AND INTERFERENCES

Appellant is not aware of any pending appeals, judicial proceedings, or interferences which may be related to, directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

a)   Claims 1-20 are pending. Claims 1, 7, 8 and 16 are independent.

b)   Claims 1-7 and 16-20 stand rejected and are the subject of this appeal.

c)   Claims 8-15 are allowed.

IV. STATUS OF AMENDMENTS

The claims listed in section "VIII. Claims Appendix" of this Appeal Brief correspond to the claims as amended and submitted in Appellant's response of November 22, 2006. These amendments were entered by the Examiner. No claim amendments have been submitted following the response of November 22, 2006. Nor are any claim amendments pending.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed invention, as recited in claim 1, is directed to a system for providing streaming fine granular scalability coded video data (Figs 1-3, paragraphs 17-18). The system comprising: a server (40; paragraphs 18-19, 29-30) for sending fine granular scalability coded

video data into a data network (100) through a plurality of channels (30); a receiver (60) (paragraphs 18, 20-22 and 25) having a first network analyzer (64, paragraph 25) that monitors network congestion conditions of the data network at the receiver (paragraphs 21 and 25), and dynamically modifies subscriptions to a predetermined number of the plurality of the channels based on the monitored congestion conditions of the data network at the receiver (Fig. 3, paragraphs 21 and 25); and an adaptive node (50, 51; paragraphs 20-22) having a second network analyzer (54, paragraph 21) that accounts for the number of the channels subscribed to by the receiver.

The claimed invention, as recited in claim 7, is directed to a method for streaming fine granular scalability coded video data (Figs 5, 6 and 1-4). The method comprising: providing a server (40; paragraphs 18-19, 29-30) for sending fine granular scalability coded video data into a data network (100) through a plurality of channels (30; paragraphs 31-32); perceiving network congestion conditions of the data network at a receiver using a network analyzer included with the receiver (paragraphs 32, 35); dynamically modifying subscriptions to a predetermined number of the plurality of the channels based on the perceived congestion conditions of the data network at the receiver (paragraphs 32-36 and 40); and accounting for the number of the channels subscribed to by the receiver at an adaptive node (paragraphs 21, 40-41).

The claimed invention, as recited in claim 16, is directed to an adaptive node for use in a streaming video data system (50, 51, 52; paragraphs 20-24). The adaptive node comprising: a data communications interface for operatively connecting to a data network (paragraphs 17-18, 21); a network analyzer (54; paragraphs 21-22) for: perceiving network congestion conditions of the data network at the adaptive node (paragraphs 21-22); and based on the perceived network congestion conditions, dynamically modifying transmission of data channels from a source of

data channels disposed logically upstream of the adaptive node to a client logically disposed downstream of the adaptive node (paragraphs 21-24 and 40-41).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-7 and 16-20 are properly rejected under 35 USC 103(a) as being obvious over US Pat. 6,148,005 (hereinafter "Paul") in view of US Patent 5,740,075 (hereinafter "Bigham").

VII. ARGUMENT

Appellant respectfully traverses the rejections in accordance with the detailed arguments set forth below.

A. Claims 1-7 and 16-20 are not properly rejected under 35 USC 103(a) as being obvious over Paul in view of Bigham.

1. Claim 1

The MPEP 2143 requires to establish a *prima facie* case of obviousness, three basic criteria must be met. One of the three criteria requires the prior art reference (or references when combined) must teach or suggest all the claim limitations. The combination of Paul and Bigham fails to teach or suggest all the limitations recited in claim 1.

Appellant's claim 1 includes the features of: "an adaptive node having a second network analyzer that accounts for the number of the channels subscribed to by the receiver."

On page 3 of the final Office Action (hereinafter OA), the Examiner admits Paul does not disclose an adaptive node as recited in claim 1.

The Examiner points to Bigham Fig. 1, access controller 16_1 as being equivalent to Appellant's claimed adaptive node. However, the Examiner further admits that Bigham does not disclose the access controller with a network analyzer (OA, page 4, line 1).

On page 3, 2nd paragraph of the OA, the Examiner assigns a number of functions to Appellant's claimed adaptive node. However, limitations from the specification cannot be read into the claim language.

Appellant's claim is very clear, the second network analyzer of the adaptive node accounts for the <u>number of the channels subscribed to by the receiver.</u>

Appellant's specification, paragraph 33, supports this feature by reciting: "[a]t step 230, server 40 and receiver 60 initiate end-to-end communication channels over data network 100 for each subscribed channel 30 logically through one or more adaptive nodes 50 disposed logically between server 40 and receiver 60. At step 240, adaptive node 50 recognizes the channels 30 subscribed to receivers 60 downstream of the adaptive node 50 operatively disposed intermediate server 40 and those receivers 60."

On page 3 of the OA, 6 lines from the bottom of the page, the Examiner is equating the claimed feature of the adaptive node with the description in Bigham, col 7, line 65 to col. 8, line 10. However, Bigham only describes the access controller providing requested connections through the access network, such as reserving and enabling access resources for a user connection. This is different from Appellant's claimed accounting for the number of channels subscribed to by the receiver. In Bigham the access controller is simply setting up connections and reporting to a higher level control element, there is no description of accounting for the subscriptions of a receiver.

Thus, Bigham fails to teach or suggest the features the Office Action asserts are found in this cited reference. The Examiner merely extracts the access controller 16_2 and inserts it into Paul, while completely disregarding Paul and Bigham as a whole. As pointed out above, there is absolutely no disclosure anywhere of an adaptive node, as recited in Appellant's claim 1. Nowhere is there any mention of the access controller having corresponding features equivalent to Appellant's features of "an adaptive node having a second network analyzer that accounts for the number of the channels subscribed to by the receiver," as recited in claim 1.

Another criteria required by MPEP 2143 is for there to be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

The OA, page 4 asserts the suggestion or motivation being to use an "adaptive node to monitor network conditions, determine whether the receiver should modify its capability in response to the network channel condition so …."

However, contrary to the assertions in the OA, the access controller in Bigham does not monitor network conditions. The access controller is simply assigning available bandwidth (see Bigham, col. 55, line 60-67), furthermore, the Examiner admits that Bigham does not describe a network analyzer. Additionally, nowhere does either reference suggest an adaptive node which monitors network conditions and determines whether the receiver should modify its capability. As admitted in the OA Paul doesn't describe an adaptive node and the access controller in Bigham is simply setting up connections or allocating resources.

Even if one argues that to set up network connections the access controller in Bigham must monitor network conditions (Appellant doesn't agree with this analysis), there is no

suggestion in Bigham that the network controller determines whether the receiver should modify

its capability as suggested in the OA.

Clearly the only suggestion or motivation is found by utilizing Appellant's own

disclosure in arriving at the proposed combination of references. Appellant respectfully submits

there is no motivation and Appellant's own disclosure is being used as a road map in order to

make this rejection.

Finally the MPEP requires there must be a reasonable <u>expectation of success</u>. There is no

teaching anywhere that there would be a reasonable expectation of successfully combining the

teachings of the cited references. Again only Appellant's disclosure is being used to provide

such a road map of success.

It is respectfully submitted that a *prima facie* case of obviousness has not been met. This

rejection fails on all three of the tests and the rejection of claim 1 should be reversed.

2. Claim 7

Appellant's independent claim 7 is directed to a method and includes the features of:

"accounting for the number of the channels subscribed to by the receiver at an adaptive node."

In the OA, page 2, the Examiner rejects claim 7 with the identical arguments presented

with respect to claim 1. Appellant essentially repeats the above arguments put forth with respect

to claim 1 in pointing out why claim 7 in not rendered obvious by the combination of Paul and

Bigham. It is respectfully requested the rejection of claim 7 be reversed.

3. Claim 16

Appellant's independent claim 16 is directed to an adaptive node for use in a streaming

video data system and includes the features of:

a data communications interface for operatively connecting to a data network; <u>a network analyzer</u> for:

  <u>perceiving network congestion conditions of the data network at the adaptive node</u>; and

  based on the perceived network congestion conditions, <u>dynamically modifying</u> transmission of data channels <u>from a source of data channels</u> disposed logically upstream of the adaptive node to a client logically disposed downstream of the adaptive node (emphasis added).

In the OA, page 2, the Examiner again simply combines this rejection with the rejection of claim 1. However, as is clearly evident, claim 16 includes features not found in claim 1.

The Examiner admits that the access controller in Bigham fails to teach a network analyzer. Furthermore, nowhere does Bigham describe the access controller <u>perceiving network congestion conditions of the data network at the adaptive node.</u>

As pointed out above, Bigham simply describes the access controller is assigning available bandwidth (see Bigham, col. 55, line 60-67). Assigning available bandwidth isn't equivalent to perceiving the congestion conditions of a network. For example, bandwidth may be available to high priority nodes, regardless of the congestion condition of the network. Thus, Bigham does not describe perceiving network congestion conditions as particularly claimed.

Furthermore, nowhere does Paul or Bigham describe an adaptive node, based on the perceived network congestion conditions, dynamically modifying transmission of data channels from a source of data channels disposed logically upstream of the adaptive node to a client logically disposed downstream of the adaptive node.

This limitation is not addressed at all by the Examiner. In addition, Appellant essentially repeats the above arguments put forth with respect to claim 1 in pointing out why claim 16 is not rendered obvious by the combination of Paul and Bigham.

4. Claims 2-6, and 17-20

Claims 2-6 depend from claim 1 and include all the limitations of claim 1. Claims 17-20 depend from claim 16 and include all the limitations of claim 16.

Furthermore, each dependent claim includes further distinguishing features. For example, in each of claims 2-5 and 17-20, further elements are recited based upon the adaptive node. The Examiner admitted that Paul fails to show the adaptive node as claimed; however, in rejecting these dependent claims the Examiner now picks and chooses unrelated elements in Paul to show the features recited in each dependent claim. No consideration is given to the claims as a whole or the totality of the teachings found in the combination of references. Such hindsight reconstruction is impermissible.
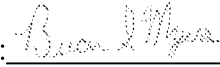
Accordingly, Appellant essentially repeats the above arguments from claims 1 and 16 and respectfully submits claims 2-6 and 17-20 are allowable by virtue of their dependency, as well as the additional subject matter recited therein and not shown in the combination of references, thus the rejection should be reversed.

CONCLUSION

In light of the above, Appellant respectfully submits that the rejection of claims 1-7 and

16-20 is in error, legally and factually, and must be reversed.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1.(previously presented): A system for providing streaming fine granular scalability coded video data, comprising:

a server for sending fine granular scalability coded video data into a data network through a plurality of channels;

a receiver having a first network analyzer that monitors network congestion conditions of the data network at the receiver, and dynamically modifies subscriptions to a predetermined number of the plurality of the channels based on the monitored congestion conditions of the data network at the receiver; and

an adaptive node having a second network analyzer that accounts for the number of the channels subscribed to by the receiver.

2.(previously presented): The system of claim 1 wherein the adaptive node further comprises a mass data store capable of buffering data.

3.(Original) The system of claim 1 wherein the adaptive node comprises a plurality of adaptive nodes, wherein at least one of the plurality of adaptive nodes is upstream of at least one other of the plurality of adaptive nodes.

4.(Original) The system of claim 1 wherein the second network analyzer merges channel control signals received from other receivers and forwards the merged channel control signals to an upstream peer in order to dynamically modify transmission of the subscribed channels to the receiver.

5.(Original) The system of claim 4 wherein the upstream peer comprises the server.

6.(Original) The system of claim 1 wherein the receiver is a plurality of receivers.

7.(previously presented): A method for streaming fine granular scalability coded video data, comprising:

provide a server for sending fine granular scalability coded video data into a data network through a plurality of channels;

perceiving network congestion conditions of the data network at a receiver using a network analyzer included with the receiver;

dynamically modifying subscriptions to a predetermined number of the plurality of the channels based on the perceived congestion conditions of the data network at the receiver; and

accounting for the number of the channels subscribed to by the receiver at an adaptive node.

8.(previously presented): A method for transmitting streaming fine granular scalability coded video data, comprising:

disposing an adaptive node logically intermediate a server and a receiver in a data network;

initiating communication between the server and the receiver over the data network logically through the adaptive node;

subscribing to one or more channels by the receiver based on network capacity as perceived by the receiver, each channel corresponding to a predetermined data layer of a plurality of data layers comprising the streaming fine granular scalability coded video data available at the server;

initiating end-to-end communication channels between the server and the receiver over the data network for each subscribed channel logically through the adaptive node;

recognizing by the adaptive node of the channels subscribed to by receivers downstream of the adaptive node operatively disposed intermediate the server and the receiver;

sending a predetermined number of data layers of the plurality of data layers by the server into the data network;

monitoring the network capacity at the receiver;

monitoring the network capacity at the adaptive node;

modifying transmission of the subscribed channels at the receiver based on network capacity as perceived by the receiver; and

modifying transmission of the subscribed channels through the adaptive node to the receiver based on network capacity as perceived by the adaptive node.

9.(previously presented): The method of claim 8, wherein the step of subscribing further comprises:

coding a portion of the streaming fine granular scalability coded video data to produce a base layer frame;

generating a motion compensated residual image from the streaming fine granular scalability coded video data and the base layer frame using a fine granular coding technique; and

generating an enhancement layer using the motion compensated residual images, the enhancement layer comprising a plurality of layers, each layer comprising at portion of the motion compensated residual images.

10.(Original) The method of claim 8 further comprising buffering the base layer frame and the enhancement layer at the adaptive node.

11.(previously presented): The method of claim 9 wherein the buffering further comprises: requesting retransmissions from an upstream node; and responding to retransmission requests from a downstream node.

12.(previously presented): The method of claim 8 further comprising: receiving layer data at a first rate from an upstream source of data; and forwarding the layer data at a second rate to a downstream receiver of the data.

13.(Original) The method of claim 8 wherein the adaptive node handles a subscription request of a client disposed logically downstream of the adaptive node.

14.(Original) The method of claim 13 wherein the client comprises at least one of a receiver and a second adaptive node.

15.(previously presented): The method of claim 13, wherein the handling comprises: receiving a subscription request from the receiver at the adaptive node; calculating a maximum subscription

level by the adaptive node; and propagating the maximum subscription level by the adaptive

node to a next peer upstream.

16.(previously presented): An adaptive node for use in a streaming video data system,

comprising:

    a data communications interface for operatively connecting to a data network;

    a network analyzer for:

        perceiving network congestion conditions of the data network at the adaptive

node; and

        based on the perceived network congestion conditions, dynamically modifying

transmission of data channels from a source of data channels disposed logically upstream

of the adaptive node to a client logically disposed downstream of the adaptive node.

17.(Original) The adaptive node of claim 16 further comprising a buffer.

18.(Original) The adaptive node of claim 17 wherein the buffer comprises a mass data storage

device.

19.(Original) The adaptive node of claim 16 wherein the adaptive node is capable of at least one

of receiving requests from a downstream receiver, selectively forwarding requests upstream,

receiving data from upstream sources, and selectively forwarding data downstream.

20.(Original) The adaptive node of claim 16 wherein the client comprises at least one of a receiver and an adaptive node.

IX. EVIDENCE APPENDIX

No evidence has been submitted pursuant to §§ 1.130, 1.131, or 1.132 of this title nor any other evidence entered by the examiner and relied upon by appellant in the appeal.

X. RELATED PROCEEDINGS APPENDIX

Appellant is not aware of any appeals or interferences related to the present application.